List S1. Pubmed search query

"child care" OR childcare OR "day care" OR daycare OR preschool OR "Head Start" OR "nursery school"

AND

Weight OR obesity OR "energy balance" OR "body composition" OR overweight OR "physical activity" OR "motor activity" OR "active play" OR playtime OR "motor skills" OR media OR "screen time" OR sedentary OR exercise OR nutrition OR eating OR diet OR fruit OR vegetables OR garden OR food OR "dietary intake"

AND

Intervention OR Campaign

NOT

Dental OR "oral health" OR immunization OR vaccination OR dehydration OR epilepsy OR hygiene OR sanitation OR asthma OR influenza OR HIV OR hepatitis OR malnutrition OR tobacco OR breastfeeding OR antibiotic OR "cerebral palsy" OR viral OR autism

Limitations

- English language
- Ages 0 5 years (Infant, Toddler, Preschool)
- January 1994 to current

List S2. Coding protocol to assess use of social marketing benchmark criteria among nutrition and physical activity interventions in early care and education centers

A. General Information

Intervention ID Number:

Citation(s):

Note: For a set of papers, include all citations.

Name of Intervention Program (if applicable):

Coder ID

Date of Extraction/Coding:

B. Study Characteristics

B1. What country was the intervention conducted in?

- 1 = United States
- 2 = Australia
- 3 = Germany
- 4 = Israel
- 5 = United Kingdom
- 6 = China
- 7 = Scotland
- 8 = Greece
- 9 = Switzerland
- 10 = Belgium
- 11 = other (please specify _____

B2. What study design was used to test the intervention?

This does not include any formative work. In the event the labeling of the study design is different from that of the definitions below, base your decision on the definition.

Group Randomized Control Trial (RCT): a study design in which groups, not individuals, are randomly assigned to an intervention or control condition.

<u>Quasi-experimental</u>: a study design that includes intervention and control conditions; however, individuals or groups are not randomly assigned to a condition.

<u>Single group designs</u>: a study when the effect of an intervention is only tested in one group. <u>Cross-over design</u>: a study design in which individuals or groups will switch from control to intervention (or intervention to control) conditions during the course of the project.

- 1 = group RCT
- 2 = quasi-experimental
- 3 = single group designs
- 4 = cross-over design
- 5 = other (please specify
- 6 = randomized controlled trial

B3. What unit of allocation or randomization was used?

Unit of allocation describes the level at which people were assigned to the intervention or control condition.

- 1 = childcare center or school
- 2 = classroom
- 3 = family
- 4 = child

B4. What were the targeted behaviors of the intervention?

1 = physical activity-only

2 = nutrition-only

3 = physical activity and nutrition

C. Participant Characteristics

C1. Was the intervention targeted/delivered to an underrepresented population?

Underrepresented would be defined as racial or ethnic minority groups as well as a low socioeconomic status. Head Start is considered an underrepresented population.

<mark>0 = no</mark>

1 = yes

D. Social Marketing Best Practices

Consumer/Audience Research and Segmentation and Targeting of Audience(s)

Consumer research is the process of gathering information to understand consumer or audience experiences, values, and needs. Desired information may include perceptions about: health issues, desired behaviors, benefits, barriers, and/or competition of desired behaviors.

Consumer research may come from primary or secondary data sources.

- Syndicated data are market research data. They come from sources other than the research team's collection of data. Syndicated data help to identify products and behaviors that do and don't align with the intervention goals. They can be used to identify population segments for targeted messages. Examples of syndicated data include: results from census or health surveys (e.g. BRFSS, NHANES), Pew, Nielsen, case reports, or PRIZM. Health data only (e.g. obesity statistics) is insufficient, but health and behavior data is sufficient from national health surveys.
- Primary data are collected by the research team and often includes formative work. Formative work
 is conducted to understand the health issue from the perspective of the
 consumer/audience/stakeholders. Examples of primary data and formative work include:
 community needs assessment, direct observation, focus groups, interviews, surveys, pre-testing of
 materials, or pilot tests of intervention activities or elements.

Both primary and syndicated data are used to inform the development and implementation of the intervention.

Consumer or audience research could inform segmentation of target audiences. Segmentation involves splitting a broad audience in to subsets who have, or are perceived to have, common needs, interests, or priorities. These variables are considered when selecting the target audience(s) for the intervention. Target audiences may be downstream, midstream, or upstream.

- Downstream refers to the individual who will make the desired behavior change. For example, children are to eat more fruits and vegetables.
- Midstream refers to those individuals (professionals, organizations, family members) who can impact or facilitate the behavior change of the individual. For example, teachers modify classroom structure to allow for room and time for physical activity.
- Upstream refers to those individuals (policy makers) who can impact or facilitate legislation or public policy that would influence the behavior change of the individual. For example, policymakers pass legislation.
- Gatekeepers are individuals or groups who have the authority to allow or deny access to a research setting or population but they do not otherwise impact or facilitate behavior change of the individual.
 For example, a childcare center director could be a gatekeeper if he or she does not otherwise play a role in the intervention to impact behavior changes in the children.
- Stakeholders are any individual or group that can affect or be affected by the intervention or campaign. For example: the target(s) of the intervention, those serving as interventionists, those supporting intervention efforts, and gatekeepers of groups or organizations.

There may be more than one target audience. Intervention strategies will then be tailored for each group. For example, materials or approaches may be age-appropriate or appropriate to the setting in which they are delivered.

```
D1. Was the term 'social marketing' explicitly used?

0 = no
```

0 = 101 = yes

D2. Was syndicated data used to describe or understand the stakeholder(s)/target audiences? NHANES and other national health surveys would count as syndicated data as long as it does not simply report prevalence of a health outcome. Using it to also describe behavior(s) associated with the health outcome will help further segment the audience.

[Benchmark Criterion: Customer Orientation]

0 = no1 = yes

D3. Was primary research conducted to uncover perceptions of the health behavior, barriers or benefits from the perspective of the stakeholders?

[Benchmark Criterion: Customer Orientation]

0 = no1 = yes

D4. Did the research team conduct formative research with the downstream audience (i.e. children)? [Benchmark Criteria: Customer Orientation, Segmentation]

0 = no1 = yes

D5. If the research team conducted formative work with the downstream audience (i.e. children), what methods were used?

[Benchmark Criterion: Customer Orientation]

0 = not reported

```
D5a. Focus groups:

0 = no
1 = yes
D5b. Interviews:
0 = no
1 = yes
D5c. Observation:
0 = no
1 = yes
D5d. Survey(s):
0 = no
1 = yes
D5e. Other: (please specify:
```

D6. Which midstream or upstream audiences did the research team conduct formative research with? [Benchmark Criteria: Customer Orientation, Segmentation]

0 = no midstream or upstream audiences identified

1 = parents- or guardians-only

2 = childcare teachers- or providers-only

3 = childcare center directors-only

4 = parents/guardians and childcare teachers/providers

```
5 = childcare teachers/providers and childcare center directors
       6 = parents/guardians and childcare center directors
       7 = parents/guardians, childcare teachers/providers, and childcare center directors
       8 = no formative work was completed with identified midstream or upstream audiences
       9 = other (please specify: __
D7. If the research team conducted formative research with midstream or upstream audiences, what
methods were used?
[Benchmark Criterion: Customer Orientation]
       0 = not reported
       D7a. Focus groups:
               0 = no
               1 = ves
       D7b. Interviews:
               0 = no
                1 = ves
       D7c. Observation:
               0 = no
                1 = yes
       D7d. Survey(s):
               0 = no
               1 = yes
       D7e. Other: (please specify:
D8. Did researchers identify any midstream or upstream audiences that they did not engage in formative
research?
Identification means the research team talked about the importance of or perhaps developed an
intervention component for a particular midstream or upstream audience.
[Benchmark Criterion: Segmentation]
       0 = no
       1 = ves
       2 = midstream or upstream audience not identified
       D8a. If yes, whom?
       1 = parents- or guardians-only
       2 = childcare teachers- or providers-only
       3 = childcare center directors-only
       4 = parents/guardians and childcare teachers/providers
       5 = childcare teachers/providers and childcare center directors
       6 = parents/guardians and childcare center directors
        7 = parents/guardians, childcare teachers/providers, and childcare center directors
        8 = other (please specify: __
       D8b. How did researchers acknowledge or incorporate the midstream or upstream audience(s)
       regarding intervention design?
       0 = no midstream or upstream audience identified
       1 = talked about but did not take any action (e.g. formative work or intervention component)
       2 = created intervention components but no formative work completed
       3 = formative work completed and intervention component created
       4 = other (specify: _____
```

D9. Did any publication associated with this intervention reveal benefits and/or barriers from formative work?

[Benchmark Criterion: Insight]

0 = no1 = ves

Exchange and Competition

The exchange acknowledges that the target audience will be asked to give up something in order to make the desired behavior change. The target audience will compare the real and perceived costs and benefits of making the desired behavior change. Costs and benefits may be tangible or intangible. Examples of tangible costs or benefits include: money or physical effort. Examples of intangible costs or benefits include: time, thoughts, feelings, attitudes, cognitive effort, and social relationships.

The research team should determine what the target audience values and what costs they perceive so that the exchange encourages the behavior change. Values and benefits of the desired behavior should be emphasized while costs should be minimized. Resources may be offered to address costs of adopting or ceasing desired behavior. If the behavior change is a result of coercion (forcing, intimidating, threatening) or enforcement (rule, policy, law), this is not voluntary and thus does not meet the criteria for exchange. Competition addresses the alternative behavior(s) that members of the target population can choose to perform instead of performing the behavior(s) being promoted in the program. In a social marketing program, when competition is addressed there should be a discussion of strategies that minimize the appeal of the competing behavior(s).

D10. Is behavior change the result of compliance with a law or policy? Note this references big 'P', not within the organizational level.

[Benchmark Criterion: Competition]

0 = no1 = yes

D11. Was the intervention designed to promote the perceived benefits of adopting or ceasing the targeted behavior(s)? Note: benefits do not have to be expressly related to formative work. [Benchmark Criteria: Insight, Exchange]

0 = no 1 = ves

D12. Was the intervention designed to decrease perceived barriers or costs of adopting or ceasing the targeted behavior(s)?

[Benchmark Criteria: Insight, Exchange]

0 = no1 = yes

D13. Does any publication associated with this intervention uncover and identify competing behavior(s)? Competing behaviors come from primary research with target audience and not things discovered through a literature review.

[Benchmark Criterion: Competition]

0 = no1 = yes

Methods Mix

The methods mix (also known as the marketing mix) is often known as the "4 P's" – product, price, place, and promotion. Together these pieces create the exchange offered to the target audience. The intervention considers the best strategic application of these P's. Oftentimes elements of the intervention or its approach will fit exclusively within one of the 4 P categories, but this is not always the case.

- Product. Product encompasses the desired behavior and any resources/materials that researchers provide the target audience with in order to carry out that behavior. Product can include tangible goods and services or intangible benefits that will support behavior change. Examples of products in social marketing include providing residents with seeds and gardening materials to increase fruit and vegetable consumption, using mobile testing sites to conduct breast cancer screenings, or providing free condoms and HIV testing to promote condom use and HIV testing.
- <u>Price</u>. Price is the cost or barriers for the target audience to perform or adopt the desired behavior. Price may include money, time, pleasure, access, embarrassment, or relationships. Once price is identified, the goal is to minimize or reduce them through the intervention.
- Place. Place can be tied to the product or to the promotion of the product. In the first instance, place is where the target audience will perform the desired behavior and/or acquire goods or services with the campaign/intervention. This is also known as a delivery system or distribution channel. Based on our inclusion criteria, this first instance of place will always be accounted for (i.e. child care center). In the second instance, place is also where the audience will be most receptive to change/adopting the new behavior. If using the seed/gardening product example mentioned above, place could be a community center (where the target audience would receive the actual product) or it could be the grocery store (where the target audience is reminded about the product and its benefits).
- <u>Promotion</u>: Promotion focuses on the communication tools that describe the program's benefits, product, price, and place. This may include key messages, messengers, communication channels, and materials. This could include mass communication or advertising but can also include small group interactions or peer-to-peer communications.

D14. Does the intervention include one or more products?

[Benchmark Criterion: Methods Mix]

0 = no

1 = ves

D15. Was the term 'product' used explicitly in discussions about the methods/marketing mix or intervention components?

0 = no

1 = yes

D16. Does the intervention discuss/acknowledge the price of making the behavior change?

This does not include the financial cost of the intervention.

[Benchmark Criteria: Exchange, Methods Mix]

0 = no

1 = yes

D17. Was the term 'price' used explicitly in discussions about the methods/marketing mix or intervention components?

0 = no

1 = yes

D18. Was the term 'place' used explicitly in discussions about the methods/marketing mix or intervention components?

[Benchmark Criterion: Methods Mix]

0 = no

1 = ves

D19. In addition to identifying the setting(s) where the intervention occurred, was the intervention designed to include other places to connect with the target audience(s) to reinforce the desired behavior change?

0 = no1 = yes

D20. Does the intervention include promotional and/or communication pieces?

[Benchmark Criterion: Methods Mix]

0 = no1 = yes

D21. Was the term 'promotion' used explicitly in discussions about the methods/marketing mix or intervention components?

0 = no1 = yes

D22. How many components (product, price, place, promotion) of the methods/marketing mix were included in the intervention? Note: based on our inclusion criteria, place will always count as one component.

[Benchmark Criterion: Methods Mix]

1 2

3

Pretesting

Pretesting is the process of getting audience feedback on intervention content. This may include feedback on initial plans for intervention activities or more concrete concepts, messages, and activities. Sometimes this may be referred to as concept or message testing.

D23. Was pretesting conducted?

[Benchmark Criteria: Customer Orientation, Segmentation]

0 = not at all

1 = one step process

2 = two step process

If no, skip to question D27.

D24. Was pretesting conducted with one or more midstream or upstream audiences?

0 = no

1 = yes

D25. Was pretesting conducted with the downstream target audience?

0 = no1 = yes

If questions D24 and D25 are no, skip to question D27.

D26. Which methods were used to conduct pretesting?

0 = not reported

D26a. Focus groups:

0 = no

1 = yes

```
D26b. Interviews:

0 = no
1 = yes

D26c. Observation:
0 = no
1 = yes

D26d. Survey(s):
0 = no
1 = yes

D26e. Other: (please specify:
```

Pilot/Feasibility Testing

Pilot/feasibility testing has occurred when some or all of the program components are carried out with a segment of the target population for a specified period of time. Pilot or feasibility testing may include lessons learned for implementation and sometimes design and materials.

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D27. Were parts of the program pilot tested?
```

This does not include piloting or validating measurement tools.

[Benchmark Criterion: Customer Orientation]

0 = no1 = yes

If no, skip to question D29.

D28. Which methods were used to evaluate pilot testing?

0 = not reported

```
D28a. Quantitative-only:

0 = no
1 = yes

D28b. Qualitative-only:
0 = no
1 = yes

D28c. Mixed Methods:
0 = no
1 = yes
```

Evaluation

Process

Process evaluation involves the use of measures designed to evaluate how well the program was implemented. Important elements of process evaluation include selecting who will provide the information about program implementation. Process evaluation measures will address what elements of the program made it easy or difficult to implement; how faithfully the program procedures were followed; suggestions that participants have to make implementation easier, or any circumstances unrelated to the program that affected program implementation. These measures can be in the form of checklists, surveys, in-depth interviews, or focus groups.

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D29. Was process evaluation included in the study?

[Evaluation – process]

0 = no or not reported

1 = yes
```

If no or not reported, skip to question D31.

```
D30. Which methods were used to conduct process evaluation?
       0 = not reported
       1 = mentioned only in protocol or methods paper but not described
       D30a. Focus groups:
               0 = no
               1 = yes
        D30b. Interviews:
               0 = no
               1 = yes
        D30c. Observation:
               0 = no
               1 = yes
       D30d. Survey(s) (this can include logs or checklists):
               0 = no
               1 = yes
        D30e. Other: (please specify: _____
```

Outcome

There is a measure (or measures) of how effective the program was in achieving the specific behavioral objectives. There should be at least one quantitative measure. Unless otherwise specified, these questions focus on children.

D31. What outcomes were evaluated?

- 1 = nutrition/diet only
- 2 = physical activity only
- 3 = nutrition/diet and physical activity
- 4 = nutrition/diet and anthropometrics
- 5 = physical activity and anthropometrics
- 6 = nutrition/diet, physical activity, and anthropometrics

D32. Which methods were used to collect nutrition/diet outcomes?

Select all that apply.

- 0 = no nutrition/diet outcomes collected
- 1 = observation
- 2 = food diary
- 3 = survey or questionnaire (e.g. food frequency questionnaire or food screener)
- 4 = 24-hour recall

D33. What methods were used to collect physical activity outcomes?

Select all that apply.

- 0 = no physical activity outcomes collected
- 1 = observation
- 2 = activity diary
- 3 = survey or questionnaire
- 4 = accelerometer
- 5 = gross motor or locomotor skill assessments
- 6 = pedometer
- 7 = fitness tests

D34. What methods were used to collect anthropometrics outcomes? Select all that apply.

0 = no anthropometrics collected

1 = weight-only

2 = body mass index (height and weight)

3 = waist circumference

4 = triceps skinfolds

5 = mid-upper arm circumference

D35. For which of the following midstream or upstream target(s) were outcomes evaluated? [Evaluation – outcomes]

0 = no midstream or upstream targets evaluated

1 = parents- or guardians-only

2 = childcare teachers- or providers-only

3 = childcare center directors-only

4 = parents/guardians and childcare teachers/providers

5 = childcare teachers/providers and childcare center directors

6 = parents/guardians and childcare center directors

7 = parents/guardians, childcare teachers/providers, and childcare center directors

E. Intervention Characteristics

E1. In which setting(s) was/were the intervention components delivered or used?

1 = childcare center-only

2 = childcare center and home

3 = childcare center and community

4 = childcare center, home, and community

5 = other (please specify

E2. Was the intervention implemented at the individual level?

For the purposes of this review, individual level will refer to the child. The individual may also be called intrapersonal level and would include targeting: knowledge, attitude, beliefs, skills, personality traits, socio-demographic characteristics, and genetic factors.

0 = no

1 = yes

E3. Was the intervention implemented at the interpersonal level?

The interpersonal level includes family, social networks, and peers and targets the social environment. Clarification for interpretation: Could the process or intervention piece be automated and serve the same purpose? (e.g. playing a recording of a book instead of having a teacher read it and lack of discussion or further education after reading) If yes, then this would not be considered interpersonal.

0 = no

1 = yes

E4. Was the intervention implemented at the organizational level?

The organizational level may also be referred to as institutional and would include: childcare or early care education centers. This focuses on curriculum, systems or policies that impact individuals within the organization (i.e. physical environment).

Clarification for interpretation: Classroom lessons are not automatically considered organizational. Intervention must be more than a classroom; is it or could it be institutionalized?

0 = no

1 = yes

E5. Was the intervention implemented at the community level?

The community level includes: larger scale social networks and norms, local structures and institutions, coalitions, and organizational networks. This focuses on norms, policies, or systems that impact interactions.

0 = no1 = yes

E6. Was the intervention implemented at the public policy level?

The policy level focuses on local, state, federal or international policies, rules, laws, and funding that impacts or supports health promotion.

0 = no1 = yes

In the words of the research team,

E7. Was the Health Belief Model used to plan, implement, or evaluate the intervention? [Benchmark Criterion: Theory]

0 = no1 = yes

E8. Was the Transtheoretical Model used to plan, implement, or evaluate the intervention? [Benchmark Criterion: Theory]

0 = no1 = yes

E9. Was the Social Learning Theory used to plan, implement, or evaluate the intervention? [Benchmark Criterion: Theory]

0 = no1 = yes

E10. Was the Social Cognitive Theory used to plan, implement, or evaluate the intervention? [Benchmark Criterion: Theory]

0 = no1 = yes

E11. Was the Theory of Planned Behavior or Theory of Reasoned Action used to plan, implement, or evaluate the intervention?

[Benchmark Criterion: Theory]

0 = no1 = yes

E12. Were any other theories used to plan, implement, or evaluate the intervention? [Benchmark Criterion: Theory]

0 = no 1 = yes (Please specify: _____)

E13. Were any other planning processes or approaches used to guide development of intervention? [Benchmark Criterion: Theory]

0 = no1 = yes

E14. Please describe the baseline sample size (centers, children), duration/dose, and who delivered intervention (research team, teacher, parent, third party).

E15. What are the components of the intervention? Include products, training or other elements necessary for implementation of the intervention.

F. Outcomes

F1. Study outcomes regarding child-level nutrition, physical activity, and/or anthropometrics.

<u>Diet</u>: Did the study report at least one statistically significant (p < 0.05) change favorable for the intervention arm?

<mark>0 = no</mark>

1 = yes

99 = not applicable

<u>Physical Activity</u>: Did the study report at least one statistically significant (p < 0.05) change favorable for the intervention arm?

0 = no

1 = yes

99 = not applicable

Anthropometric: Did the study report at least one statistically significant (p < 0.05) change favorable for the intervention arm?

<mark>0 = no</mark>

1 = yes

99 = not applicable

List S3. Nutrition and physical activity interventions conducted in early care and education centers, and supporting manuscripts, reviewed for use of social marketing benchmark criteria

Alhassan S, Nwaokelemeh O, Ghazarian M, Roberts J, Mendoza A, Shitole S. Effects of locomotor skill program on minority preschoolers' physical activity levels. Pediatr Exerc Sci. 2012; 24:435-449.

Alhassan S, Nwaokelemeh O, Lyden K, Goldsby T, Mendoza A. A pilot study to examine the effect of additional structured outdoor playtime on preschoolers' physical activity levels. Child Care in Practice. 2013; 19:23-35.

Alhassan S, Sirard JR, Robinson TN. The effects of increasing outdoor play time on physical activity in latino preschool children. International journal of pediatric obesity: IJPO: an official journal of the International Association for the Study of Obesity. 2007; 2:153-158.

Alkon A, Crowley AA, Neelon SEB, et al. Nutrition and physical activity randomized control trial in child care centers improves knowledge, policies, and children's body mass index. BMC Public Health. 2014; 14:215-215.

Annesi JJ, Smith AE, Tennant GA. Effects of the start for life treatment on physical activity in primarily african american preschool children of ages 3–5 years. Psychol Health Med. 2013; 18:300-309.

Annesi JJ, Smith AE, Tennant G. Cognitive-behavioural physical activity treatment in african-american pre-schoolers: Effects of age, sex, and bmi. J Paediatr Child Health. 2013; 49:E128-132.

Annesi JJ, Smith AE, Tennant GA. Reducing high bmi in african american preschoolers: Effects of a behavior-based physical activity intervention on caloric expenditure. South Med J. 2013; 106:456-459.

Annesi JJ, Smith AE, Tennant GA. Effects of a cognitive—behaviorally based physical activity treatment for 4- and 5-year-old children attending us preschools. Int J Behav Med. 2013; 20:562-566.

Baskale H, Bahar Z. Outcomes of nutrition knowledge and healthy food choices in 5- to 6-yearold children who received a nutrition intervention based on piaget's theory. Journal for specialists in pediatric nursing: JSPN. 2011; 16:263-279.

Bayer O, von Kries R, Strauss A, et al. Short- and mid-term effects of a setting based prevention program to reduce obesity risk factors in children: A cluster-randomized trial. Clinical nutrition (Edinburgh, Scotland). 2009; 28:122-128.

Herbert B, Staub A, Mayer A, Duvinage K, Mitschek C, Koletzko B. Implementation process and acceptance of a setting based prevention programme to promote healthy lifestyle in preschool children. Health Educ J. 2012; 72(3): 363-372.

Bell LK, Hendrie GA, Hartley J, Golley RK. Impact of a nutrition award scheme on the food and nutrient intakes of 2-to 4-year-olds attending long day care. Public Health Nutr. 2015; 18:2634-2642.

Bellows LL, Davies PL, Anderson J, Kennedy C. Effectiveness of a physical activity intervention for head start preschoolers: A randomized intervention study. The American Journal of Occupational Therapy: Official Publication of the American Occupational Therapy Association. 2013; 67:28-36.

Bellows L, Anderson J. The food friends get movin' with mighty moves: A physical activity program for preschoolers. J Nutr Educ Behav. 2013; 45:473-475.

Bellows L, Silvernail S, Caldwell L, et al. Parental perception on the efficacy of a physical activity program for preschoolers. J Community Health. 2011; 36:231-237.

Bellows L, Anderson J, Davies P, Kennedy C. Integration of social marketing elements in the design of a physical activity program for preschoolers. Soc Marketing Quarterly. 2009; 15(1): 2-21.

Bellows L, Anderson J, Gould SM, Auld G. Formative research and strategic development of a physical activity component to a social marketing campaign for obesity prevention in preschoolers. J Community Health. 2008; 33:169-178.

Bellows L. Development and evaluation of Food Friends Get Movin with Mighty Moves, a physical activity program to prevent obesity in low-income preschoolers [dissertation]. Fort Collins: Colorado State University; 2007.

Bonis M, Loftin M, Ward D, Tseng TS, Clesi A, Sothern M. Improving physical activity in daycare interventions. Childhood Obesity. 2014; 10:334-341.

Bonvin A, Barral J, Kakebeeke TH, et al. Effect of a governmentally-led physical activity program on motor skills in young children attending child care centers: A cluster randomized controlled trial. Int J Behav Nutr Phys Act. 2013; 10.

Byrne E, Nitzke S. Preschool children's acceptance of a novel vegetable following exposure to messages in a storybook. J Nutr Educ Behav. 2002; 34:211-214.

Callcott D, Hammond L, Hill S. The synergistic effect of teaching a combined explicit movement and phonological awareness program to preschool aged students. Early Childhood Education Journal. 2015; 43:201-211.

Cardon G, Labarque V, Smits D, De Bourdeaudhuij I. Promoting physical activity at the preschool playground: The effects of providing markings and play equipment. Prev Med. 2009; 48:335-340.

Cason KL. Evaluation of a preschool nutrition education program based on the theory of multiple intelligences. J Nutr Educ. 2001; 33:161-164.

Cespedes J, Briceno G, Farkouh ME, et al. Targeting preschool children to promote cardiovascular health: Cluster randomized trial. Am J Med. 2013; 126:27-U71.

Cespedes J, Briceno G, Farkouh ME, et al. Promotion of cardiovascular health in preschool children: 36-month cohort follow-up. The American Journal of Medicine. 2013; 126:1122-1126.

Cooke LJ, Chambers LC, Anez EV, et al. Eating for pleasure or profit: The effect of incentives on children's enjoyment of vegetables. Psychol Sci. 2011; 22:190-196.

Correia DCS, O'Connell M, Irwin ML, Henderson KE. Pairing vegetables with a liked food and visually appealing presentation: Promising strategies for increasing vegetable consumption among preschoolers. Childhood Obesity. 2014; 10:72-76.

Cosco NG, Moore RC, Smith WR. Childcare outdoor renovation as a built environment health promotion strategy: Evaluating the preventing obesity by design intervention. American Journal of Health promotion: AJHP. 2014; 28:S27-32.

Davison KK, Jurkowski JM, Li K, Kranz S, Lawson HA. A childhood obesity intervention developed by families for families: Results from a pilot study. Int J Behav Nutr Phys Act. 2013; 10:3-5868-5810-5863.

Jurkowski JM, Green Mills LL, Lawson HA, Bovenzi MC, Quartimon R, Davison KK. Engaging low-income parents in childhood obesity prevention from start to finish: A case study. J Community Health. 2013; 38:1-11.

Dawson-McClure S, Brotman LM, Theise R, et al. Early childhood obesity prevention in low-income, urban communities. Journal of prevention & intervention in the community. 2014; 42:152-166.

Brotman LM, Dawson-McClure S, Huang KY, et al. Early childhood family intervention and long-term obesity prevention among high-risk minority youth. Pediatrics. 2012; 129:e621-628.

Dazeley P, Houston-Price C. Exposure to foods' non-taste sensory properties. A nursery intervention to increase children's willingness to try fruit and vegetables. Appetite. 2015; 84:1-6.

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